AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-2. (Canceled)

3. (Withdrawn) The heat-transfer pipe provided with internal grooves according to claim 8, wherein said secondary grooves are notched grooves in a spiral direction.

4-5. (Canceled)

6. (Currently Amended) A method for manufacturing a heat-transfer pipe provided with internal grooves, comprising the continuous steps of:

marking a plurality of rows of grooves including a first row of substantially parallel grooves alternating with a second row of substantially parallel grooves on a flat, plate-like heat-transfer pipe material by using a first marking roll, said first and second rows ~~being adjacent~~contacting one another, wherein

the substantially parallel grooves in the first row and the substantially parallel grooves in the second row ~~intersect~~contact one another to form regions of V-shaped patterns, with each set of corresponding grooves forming individual V-shapes by their intersection, said regions being serially repeated along a line on said inner surface perpendicular to a pipe axis direction, and

the first row and the second row are different in width in a circumferential direction of the pipe body;

marking secondary grooves at least in part of projected portions formed between respective grooves of the plurality of rows of the grooves which are arranged in the V-shaped patterns by using a second marking roll,

said secondary grooves being fine grooves having a small width compared to a radial direction of said projection portions and extending ~~continuously~~ from one side surface of the projected portions to the other side surface thereof; and

forming the flat plate-like heat-transfer pipe material into a cylindrical pipe by using a roll-forming device.

7. (Currently Amended) A device for manufacturing a heat-transfer pipe with internal grooves, comprising:

a first marking roll for marking a plurality of rows of grooves including a first row of substantially parallel grooves alternating with a second row of substantially parallel grooves in a flat plate-like heat-transfer pipe material, said first and second rows ~~being adjacent~~contacting one another, wherein

the substantially parallel grooves in the first row and the substantially parallel grooves in the second row ~~intersect~~contact one another to form regions of V-shaped patterns, with each set of corresponding grooves forming individual V-shapes by their intersection, said regions being serially repeated along a line on said inner surface perpendicular to a pipe axis direction, and

the first row and the second row are different in width in a circumferential direction of the pipe body;

a second marking roll for marking secondary grooves at least in part of projected portions formed between respective grooves of the plurality of rows of the grooves arranged in V-shaped patterns,

said secondary grooves being fine grooves having a small width compared to a radial direction of said projection portions and extending ~~continuously~~ from one side surface of the projected portions to the other side surface thereof; and

a roll forming device for forming the flat plate-like heat-transfer pipe material into a cylindrical pipe,

wherein the first marking roll, the second marking roll and the roll forming device are provided successively side by side in a direction of movement of the flat plate-like heat-transfer pipe material so as to continuously mark the grooves arranged in V-shaped patterns and the secondary grooves successively by the first and second marking rolls and then form a cylindrical pipe by roll forming by the roll forming device.

8. (Withdrawn) A heat-transfer pipe provided with internal grooves, comprising:

a pipe body;

a plurality of rows of grooves including a first row of parallel grooves and a second row of parallel grooves on an inner surface of the pipe body, wherein

the parallel grooves in the first row and the parallel grooves in the second row form regions of V-shaped patterns said regions being arranged symmetrically with respect to a line on said inner surface parallel to a pipe axis direction,

the first row and the second row are different in width in a circumferential direction of the pipe body; and

secondary grooves, said secondary grooves having a prescribed depth formed from a top side towards a base side at least in part of projected portions formed between respective grooves of the plurality of rows of the grooves arranged in the V-shaped patterns.

9. (Currently Amended) A heat-transfer pipe provided with internal grooves, comprising:

a pipe body;

a plurality of rows of grooves including a first row of substantially parallel grooves alternating with a second row of substantially parallel grooves on an inner surface of the pipe body, said first and second rows ~~being adjacent~~contacting one another, wherein

the substantially parallel grooves in the first row and the substantially parallel grooves in the second row ~~intersect~~contact one another to form regions of V-shaped patterns, with each set of corresponding grooves forming individual V-shapes by their intersection, said regions being serially repeated along a line on said inner surface perpendicular to a pipe axis direction,

the first row and the second row are different in width in a circumferential direction of the pipe body; and

secondary grooves, said grooves having a prescribed depth formed in an outer surface of at least part of projected portions formed between respective grooves of the rows of grooves arranged in the V-shaped patterns said secondary grooves being fine grooves having a small width compared to a radial direction of said projection portions and extending ~~continuously~~ from one side surface of the projected portions to the other side surface thereof.

10. (New) The method according to claim 6, wherein said secondary grooves each have a rectangular shape.

11. (New) The device according to claim 7, wherein the secondary grooves each have a rectangular shape.

12. (New) The heat transfer pipe according to claim 9, wherein the secondary grooves each have a rectangular shape.